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Toni Paila

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SQUIRE, SANDERS & DEMPSEY L.L.P.

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EXAMINER

CEHIC, KENAN

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/792,092	Applicant(s) PAILA ET AL.	
	Examiner KENAN CEHIC	Art Unit 2416	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 December 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-16 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

1. Claim 1-12 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

For claim 1, “generating...second multicast tree for control messages...from a network multicast controller to at least **one** multicast controller at cell level...transmitting the control messages...along the at least one second multicast tree to the at least **one** multicast controller” is indefinite. The limitation is directed towards multicast messages, however the claim language can yield a situation where messages are transmitted from the network multicast controller to one cell level controller, which is unicast. For it to be multicasting one would have to have at least two multicast controllers at cell level.

Dependent claims are rejected on the basis of their dependency.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
 2. Ascertaining the differences between the prior art and the claims at issue.
 3. Resolving the level of ordinary skill in the pertinent art.
 4. Considering objective evidence present in the application indicating obviousness or nonobviousness.
2. Claim 1, 4, 11, 13, 15, 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over Thompson et al. (US 2002/0073086) in view of Korus et al (US 7,075,929)

For claim 1, Thompson discloses A method (see fig 10a-c and section 0093), comprising: transmitting multicast data packets (see fig 10c, Q and section 0099 “multicasts queries on the new multicast group”) in at least one first multicast tree (see fig 10c and section 0099 “constructing the query distribution tree...the tree is established...multicasts queries on the new multicast group”) from one transmitter (see fig 10c BC) through a plurality of multicast controllers (see fig 10c, rectangle at bottom of multicast tree, same as ED in fig 10c; fig. 2; 104) to a plurality of recipients (see fig 2; 106; and section 0047 “queries....received by the end-user computing devices....answered by...end-user device...query directed at the end-user device's device node...evoke a response...from the device...at that device node...");

generating at least one second multicast tree (see fig 10a; 2) for control messages (see fig 10a, 2 and section 0099 “multicasts this join instruction to group”) in an internet protocol network (see fig 1 and section 0036 “standard TCP/IP network” and section 0043 “IP

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address” and section 0058 “CDN 100...IP multicast”) from a network multicast controller (see fig 10c; CS1) to at least one multicast controller at edge level (see fig 10c, rectangle at bottom of multicast tree, same as ED in fig 10c; fig. 2; 104); and transmitting the control messages (see fig 10a ; join instruction, 2 and section 0099 “multicasts this join instruction”) from the network multicast controller (see fig 10c; CS1) along the at least one second multicast tree (see fig 10a, 2 and section 0099 “multicasts this join instruction to group”) to the at least one multicast controller at cell level (see fig 10c, rectangle at bottom of multicast tree, same as ED in fig 10c; fig. 2; 104), a command configured to connect to the at least one first multicast tree (see fig 10a; Join instruction; section 0099 "instructing them to join...multicasts this join instruction to group") of the internet protocol network configured for multicasts (see fig 1 and section 0036 “standard TCP/IP network” and section 0043 “IP address” and section 0058 “CDN 100...IP multicast”).

For claim 4, Thompson discloses transmitting (see fig 10c, Q and section 0099 “multicasts queries on the new multicast group”; section 0099 “multicasts queries on the new multicast group”) , after connecting to the at least one first multicast tree configured for multicasts (see fig 10b; on; section 0099 "instructing them to join...multicasts this join instruction to group"), by the at least one multicast controller at edge level (see fig 10c, rectangle at bottom of multicast tree, same as ED in fig 10c; fig. 2; 104), packets received through the at least one first multicast tree (see fig 10c; Q) to at least one receiver in a cell (see fig 2; 106; and section 0047 “queries....received by the end-user

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computing devices....answered by...end-user device...query directed at the end-user device's device node...evoke a response...from the device...at that device node...").

For claim 11, Thompson discloses notifying (see fig 10b; on; section 0099 "instructing them to join...multicasts this join instruction to group"), after receiving a control message (see fig 10a ; join instruction, 2 and section 0099 "multicasts this join instruction") from the network multicast controller (see fig 10a; CS1) through the at least one multicast tree (see fig 10a; Join instruction) configured for control messages (see fig 10a ; join instruction, 2 and section 0099 "multicasts this join instruction"), by the at least one multicast controller at edge level (see fig 10c, rectangle at bottom of multicast tree, same as ED in fig 10c; fig. 2; 104), recipients of its cell that a multicast must be received (see section 0099 "program A' recipients instructing them to join" and fig 2; 106; and section 0047 "queries....received by the end-user computing devices....answered by...end-user device...query directed at the end-user device's device node...evoke a response...from the device...at that device node...").

For claim 13, Thompson discloses An arrangement (see fig 10a-c) for implementing multicasting (see fig 10c, Q and section 0099 "multicasts queries on the new multicast group") in internet protocol networks (see fig 1 and section 0036 "standard TCP/IP network" and section 0043 "IP address" and section 0058 "CDN 100...IP multicast"), the arrangement comprising:

a plurality of routers (see section 0058 "CDN....router that can deliver content from content sources") configured to transmit of different components (see section 0058 "CDN....router that can deliver content from content sources" and fig 10a and fig 10c) in

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the internet protocol networks (see fig 1 and section 0036 “standard TCP/IP network” and section 0043 “IP address” and section 0058 “CDN 100...IP multicast”) to each other (see section 0058 “CDN...router that can deliver content from content sources” and fig 10a and fig 10c);

at least one first multicast tree (see fig 10c and section 0099 “constructing the query distribution tree...the tree is established...multicasts queries on the new multicast group”) configured to transmit multicast packets (see fig 10c, Q and section 0099 “multicasts queries on the new multicast group”) through a plurality of multicast controllers (see fig 10c, rectangle at bottom of multicast tree, same as ED in fig 10c; fig. 2; 104) to a plurality of recipients (see fig 2; 106; and section 0047 “queries....received by the end-user computing devices....answered by...end-user device...query directed at the end-user device's device node...evoke a response...from the device...at that device node...”)

a plurality of edge-level multicast controllers (see fig 10a; ED) configured to transmit packets to the plurality of receivers (see fig 2; 106; and section 0047 “queries....received by the end-user computing devices....answered by...end-user device...query directed at the end-user device's device node...evoke a response...from the device...at that device node...”); and

a network multicast controller (see fig 10a; CS1) that is arranged to control (see fig 10a ; join instruction, 2 and section 0099 “multicasts this join instruction”) the edge-level multicast controllers (see fig 10c, rectangle at bottom of multicast tree, same as ED in fig 10c; fig. 2; 104),

wherein an internet protocol network (see fig 1 and section 0036 “standard TCP/IP network” and section 0043 “IP address” and section 0058 “CDN 100...IP multicast”) comprises at least one second multicast tree (see fig 10a; 2) for control messages (see fig 10a, 2 and section 0099 “multicasts this join instruction to group”) configured to route control messages (see fig 10a, 2 and section 0099 “multicasts this join instruction to group”) from the network multicast controller (see fig 10a; CS1) to the plurality of edge-level multicast controllers (see fig 10c, rectangle at bottom of multicast tree, same as ED in fig 10c; fig. 2; 104) , the network multicast controller (see fig 10a; CS1) configured to transmit the control messages (see fig 10a ; join instruction, 2 and section 0099 “multicasts this join instruction”) along the at least one second multicast tree (see fig 10a; Join Instruction) to the plurality of edge-level multicast controllers (see fig 10c, rectangle at bottom of multicast tree, same as ED in fig 10c; fig. 2; 104), a command configured to connect to the at least one first multicast tree (see fig 10a; Join instruction; section 0099 "instructing them to join...multicasts this join instruction to group") of the internet protocol network (see fig 1 and section 0036 “standard TCP/IP network” and section 0043 “IP address” and section 0058 “CDN 100...IP multicast”) configured for multicast transmissions (see fig 10c, Q and section 0099 “multicasts queries on the new multicast group”).

For claim 15, Thompson discloses wherein the edge-level multicast controllers (see fig 10b; ED) are configured to connect to the multicast tree (see fig 10b; Join and fig 10a; Q) of the internet protocol network configured for multicasts (see fig 1 and section 0036 “standard TCP/IP network” and section 0043 “IP address” and section 0058 “CDN

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100...IP multicast”) after receiving a control message (see fig 10a ; join instruction, 2 and section 0099 “multicasts this join instruction”) from the network multicast controller (see fig 10a; CS1) through the multicast tree configured for control messages (see fig 10a; Join instruction and section 0099).

For claim 16, Thompson discloses An arrangement (see fig 10a-c), comprising:

first transmission means (see section 0058 “CDN...router that can deliver content from content sources” and fig 10a and fig 10c) for transmitting different components (see section 0058 “CDN...router that can deliver content from content sources” and fig 10a and fig 10c) in internet protocol networks (see fig 1 and section 0036 “standard TCP/IP network” and section 0043 “IP address” and section 0058 “CDN 100...IP multicast”) to each other (see section 0058 “CDN...router that can deliver content from content sources” and fig 10a and fig 10c);

second transmission means (see fig 10c and section 0099 “constructing the query distribution tree...the tree is established...multicasts queries on the new multicast group”) for transmitting multicast packets (see fig 10c, Q and section 0099 “multicasts queries on the new multicast group”) through a plurality of multicast controllers (see fig 10c, rectangle at bottom of multicast tree, same as ED in fig 10c; fig. 2; 104) to a plurality of recipients (see fig 2; 106; and section 0047 “queries....received by the end-user computing devices....answered by...end-user device...query directed at the end-user device's device node...evoke a response...from the device...at that device node...”);

third transmission means (see fig 2; 104, A, B, C, D, 106) for transmitting packets to the plurality of receivers (see fig 2; 106; and section 0047 “queries....received by the end-

user computing devices....answered by...end-user device...query directed at the end-user device's device node...evoke a response...from the device...at that device node..."); and control means for controlling (see fig 10a ; join instruction, 2 and section 0099 "multicasts this join instruction") the edge-level multicast controllers (see fig 10c, rectangle at bottom of multicast tree, same as ED in fig 10c; fig. 2; 104), wherein an internet protocol network (see fig 1 and section 0036 "standard TCP/IP network" and section 0043 "IP address" and section 0058 "CDN 100...IP multicast") comprises fourth transmission means (see section 0058 "CDN....router that can deliver content from content sources" and fig 2; E.D., 106) for routing control messages transmitted (see fig 10a ; join instruction, 2 and section 0099 "multicasts this join instruction") from the control means (see fig 10a ; join instruction, 2 and section 0099 "multicasts this join instruction") to the third transmission means (see fig 2; 104, A, B, C, D, 106), the control means (see fig 10a) for transmitting the control messages (see fig 10a ; join instruction, 2 and section 0099 "multicasts this join instruction") along the fourth transmission means (see section 0058 "CDN....router that can deliver content from content sources" and fig 2; E.D., 106) to the second transmission means (see fig 10a; 10c fig 2; 104, A, B, C, D, 106 ;and section 0099 "constructing the query distribution tree...the tree is established...multicasts queries on the new multicast group") , and a command configured to connect (see fig 10a; Join instruction; section 0099 "instructing them to join...multicasts this join instruction to group") to the second transmission means (see fig 10c and section 0099 "constructing the query distribution tree...the tree is established...multicasts queries on the new multicast group") of the internet protocol

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network configured for multicast transmissions (see fig 1 and section 0036 “standard TCP/IP network” and section 0043 “IP address” and section 0058 “CDN 100...IP multicast”).

Thompson is does not explicitly discuss:

For 1, and similarly for 13, 16, edge devices at cell level; the control messages comprising information on the multicast transmission of the internet protocol network

For claim 4, edge devices at cell level

Korus from the same or similar field of endeavor discloses the following features:

For 1, and similarly for 13, 16, Korus discloses edge devices at cell level (fig 1; 101-112 and col 8 line 15-30 “new site(s)”; the control messages comprising information on the multicast transmission (see col 8 lines 15-30 “instruct the new site(s) to join the multicast group and inform the site of the TTL scope” and col 4 line 15-50 “multicast scope value...TTL”) of the internet protocol network (see col 2 line 50-65 “IP multicast communication system or network 100”)

For claim 4, edge devices at cell level (fig 1; 101-112 and col 8 line 15-30 “new site(s)”).

It would have been obvious to one of the ordinary skill in the art at the time of the invention to modify the system of Thompson by using the features, as taught by X, in order to provide a wireless communication system which makes use of IP multicast where the terminals may roam between multiple zones, where bandwidth is not wasted and is scalable (see Korus col 1-2)

Furthermore, a ordinary of skill could have used the features (having edge devices which are associated with a zone/cell and that the control messages regarding a multicast have

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the information about that multicast) in the system of Thompson and the feature would have merely performed the same function as it did separately. A person of the ordinary skill would have recognized that the combination of Thompson and the pointed out features of Korus would have resulted in predictable results.

3. Claim 2 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Thompson et al. (US 2002/0073086) and Korus et al (US 7,075,929) as applied to claim 1 above, further in view of Khan et al (US 2002/0143951).

For claim 2 and similarly 14, Thompson and Korus discloses the claimed invention as described in paragraph 2.

For claim 2, and similarly 14, Thompson discloses to the at least one multicast tree configured for the network control messages tree (see section 0099 “distribution tree...content source CS 1 multicasts this join instruction...distribution tree...” and fig 10a); discloses at least one multicast controller at edge level level (see fig 10c, rectangle at bottom of multicast tree, same as ED in fig 10c; fig. 2; 104)

For claim 2 and similarly 14, Korus further discloses at edge devices at cell level (fig 1; 101-112 and col 8 line 15-30 “new site(s)”) receiving network control messages (see col 8 lines 15-30 “instruct the new site(s) to join the multicast group and inform the site of the TTL scope” and col 4 line 15-50 “multicast scope value...TTL”).

Ekl and Thompson silent about:

For claim 2 and similarly 14, when connecting to the internet protocol network, connecting to the at least one multicast.

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Khan from the same or similar field of endeavor discloses a communication network with the following features:

For claim 2 and similarly 14, when connecting to the internet protocol network (see section 0027 “new agent...newly started on a server computer...perform tow important tasks at startup...join the appropriate multicast group”), connecting to the at least one multicast (see section 0027 “new agent...newly started on a server computer...perform tow important tasks at startup...join the appropriate multicast group”).

It would have been obvious to one of the ordinary skill in the art at the time of the invention to modify the system of Ek and Thompson by using the features, as taught by Khan, in order to provide a method that when a device/program connects starts up it immediately connects to a multicast group which transmits important messages , thus no manual intervention is needed and a possible forgetting to join a multicast is prevented; and in order to provide a method/system which solves the problem of limited multicast availability by providing a novel method and system for bridging multicast and unicast (see Khan sections 0009-0012).

4. Claim 3, 5, and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Thompson et al. (US 2002/0073086) and Korus et al (US 7,075,929) as applied to claim 1 above, further in view of Okanou (US 6,243,758).

For claim 3, 5, and 9 Thompson and Korus discloses the claimed invention as described in paragraph 2.

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For claim 3, Thompson discloses connecting (see fig 10b; Join; section 0099 "instructing them to join...multicasts this join instruction to group"), after receiving a control message tree (see fig 10a; Join instruction; section 0099 "instructing them to join...multicasts this join instruction to group") from the network multicast controller (see fig 10c; CS1) through the at least one multicast tree (see fig 10a; 2) configured for the control messages (see fig 10a, 2 and section 0099 "multicasts this join instruction to group"), the at least one multicast controller at edge level_(see fig 10c, rectangle at bottom of multicast tree, same as ED in fig 10c; fig. 2; 104)_to the at least one multicast tree configured for multicasts (see fig 10c and section 0099 "constructing the query distribution tree...the tree is established...multicasts queries on the new multicast group") .

For claim 9, Thompson further disclose registering (see Fig 10b; Join), after receiving a control message (see fig 10a; Join instruction; section 0099 "instructing them to join...multicasts this join instruction to group") from the network multicast controller (see fig 10a-c; CS1), by the at least one multicast controller at edge level (see fig 10b; ED), a recipient of a multicast (see fig 10c; Q)

For claim 9, Korus further discloses the edge devices at cell level (fig 1; 101-112 and col 8 line 15-30 "new site(s)")

Thompson and Korus do not explicitly discuss:

For claim 3 and 9 multicast defined in the control message.

For claim 5, the control messages further comprise information on an identifier of one or more multicast groups

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Okanoue from the same or similar field of endeavor discloses a communication network with the following features:

For claim 3 and 9 Okanoué discloses multicast defined in the control message (see col 6 line 39-50 “sends a control message...to inform them of the multicast address of its group”).

For claim 5, Okanoué discloses the control messages further comprise information on an identifier of one or more multicast groups (see col 6 line 39-50 “sends a control message...to inform them of the multicast address of its group”)

It would have been obvious to one of the ordinary skill in the art at the time of the invention to modify the system of Thompson and Korus by using the features, as taught by Okanoué, in order to provide a computer network capable of selectively routing multicast packet to home mobile hosts visiting a subnetwork external to a scope of foreign mobile hosts visiting a subnetwork within the scope (see Oknoue col 1)

5. Claim 6-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Thompson et al. (US 2002/0073086) and Korus et al (US 7,075,929) as applied to claim 1 above, further in view of Amara et al (US 2005/0063352).

For claim 6-8 Thompson and Korus discloses the claimed invention as described in paragraph 2.

For claim 6, Thompson further discloses the control messages (see fig 10a ; join instruction, 2 and section 0099 “mulitcasts this join instruction”).

Thompson and Korus silent about:

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For claim 6, information on a time of validity of the control messages.

For claim 7, the control messages further information on a sender authentication.

For claim 8, the control messages further comprise a receiver filter.

Amara from the same or similar field of endeavor discloses a communication network with the following features:

For claim 6, Amara discloses information on a time of validity of the control messages (see fig 1; TTL and section 0026 “TTL...time to live...lifetime”).

For claim 7, Amara discloses the control messages further information on a sender authentication (see section 0024 “source address field”; and fig 1; Source address).

For claim 8, Amara discloses the control messages further comprise a receiver filter (see fig 1 Destination address; section 0026 "destination address").

It would have been obvious to one of the ordinary skill in the art at the time of the invention to modify the system of Thompson and Korus by using the features, as taught by Amara, in order to provide a “new and improved way to provide policy service in an IPsec environment.” (see Amara section 0004-0011).

6. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable Thompson et al. (US 2002/0073086) and Korus et al (US 7,075,929) as applied to claim 1 above, furth in view of Xu et al (US 2005/0283447).

For claim 10, Thompson and Korus discloses the claimed invention as described in paragraph 2.

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For claim 10, Thompson further discloses after receiving a control message from the network multicast controller messages (see fig 10a ; join instruction, 2 and section 0099 “multicasts this join instruction”), by the at least one multicast controller at edge level (see fig 10c, rectangle at bottom of multicast tree, same as ED in fig 10c; fig. 2; 104) and recipients of its cell (see fig 2; 106; and section 0047 “queries....received by the end-user computing devices....answered by...end-user device...query directed at the end-user device's device node...evoke a response...from the device...at that device node...”).

For claim 10, Korus further discloses edge devices at cell level (fig 1; 101-112 and col 8 line 15-30 “new site(s)”)

Thompson and Korus are silent about:

For claim 10, notifying that a multicast is available.

Xu from the same or similar field of endeavor discloses a communication network with the following features:

For claim 10, notifying that a multicast is available (see section 0051 “announcing the available multicast session to user terminal...via multicast data network”).

It would have been obvious to one of the ordinary skill in the art at the time of the invention to modify the system of Thompson and Korus by using the features, as taught by Xu, in order to provide a method where the user terminal is always up to date on which multicast are available / when they have started so that the user can have the choice to join it.

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7. Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Thompson et al. (US 2002/0073086) and Korus et al (US 7,075,929) in view of Dean et al. (US 2003/0061333 A1)

For claim 12, Thompson and Korus teaches all the claimed invention as described in paragraph 2.

For claim 12, Thompson discloses after receiving a control message (see fig 10a ; join instruction, 2 and section 0099 “multicasts this join instruction”) from the network multicast controller (see fig 10c; CS1) through the at least one multicast tree (see fig 10a, 2 and section 0099 “multicasts this join instruction to group”) configured for control messages (see fig 10a ; join instruction, 2 and section 0099 “multicasts this join instruction”); multicast controller at edge level (see fig 10c, rectangle at bottom of multicast tree, same as ED in fig 10c; fig. 2; 104).

For claim 12, Korus discloses edge devices at cell level (fig 1; 101-112 and col 8 line 15-30 “new site(s)”).

Thompson and Korus does not teach refraining from processing the control message regarding multicast transmission.

Dean et al. from the same or similar field of endeavor teaches that a device refraining from processing the control message regarding multicast transmission (see section 0051 lines 6-9 of Dean et al.). Thus it would have been obvious to a person of ordinary skill in the art at the time the invention was made to combine the method of disregarding messages about multicast into the communication system as taught by Ekl and

Thompson. One could have implemented a similar transaction ID as taught by Dean et al. into one of the routers as taught by Thompson and Korus. This could have been done with either implementing a processor in the router or connecting a computer to the router which can accomplish the processing of the transaction ID. The motivation is that once the user has received advertisement from the same vendor/transaction ID, the advertisement is not repeated to the user again.

Response to Arguments

8. Applicant's arguments filed 12/23/2008 have been fully considered but they are not persuasive.

For claims 1-12, the applicant argues that the claims are not unclear or indefinite as currently presented. Specifically, the applicant argues that while the multicast designation is related / concerned with the transmission of packets, it does not limit the number of recipients, i.e. only one node could receive a multicast packet. While this might be true, the claim is directed towards transmitting, via the second multicast tree to a single node. The claim does not recite any limitations about receiving messages via the second multicast tree, on which the applicant's arguments are based. Accordingly, the examiner fails to be persuaded by applicant arguments and maintains that the scope of the claim is unclear.

For claim 1 and similarly claims 13 and 16, the applicant argues that "generating at least one second multicast tree ... and transmitting the control messages ...along the at least one second multicast tree ... the control messages comprising ... a

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command configured to connect to the at least one first multicast tree," is not disclosed by Thompson. Specifically, the applicant alleges that the office action asserted the establishing of the new multicast group (section 0099 "Once the tree established, the broadcast center multicasts queries") corresponds to the generation of the second multicast tree and that there is no disclosure of transmitting commands, via the newly established multicast tree, to join another multicast tree. The examiner submits that the office action did not assert such a view. The office action clearly cited on page 3, that the multicast group of figure 10a is considered as the second multicast group, and that figure 10c is the first multicast group. The office action asserted that a multicast tree is generated, when the content source 1(CS 1) of figure 10a multicasts the join message to the group recipients, as clearly recited in the office action ("Content source CS 1 multicasts this join instruction"). Further, the office action clearly took the stance that, the recipients join and receive multicast transmission via a second multicast tree as shown in figure 10c and section 0099 "Upon receiving the instruction...members send join messages...constructing the...tree...Once the tree is established...broadcast center multicasts...on the new multicast group". It is clear the first and second multicast tree are different as shown in figure 10a and 10c and based on the fact that one originates at the content source while the other at the broadcast center. For the above, reasoning the examiner fails to see how Thompson does not disclose the discussed limitation. Furthermore, the applicant continues to base arguments on the assertion that a "first multicast tree" and "second multicast tree" imply different multicast trees must be

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present. The examiner maintains the stance that different multicast trees are not required by the recited claim language.

For claim 6-8, 10, 12, the applicant argues that the rejections are improper since the used references do not antedate the perfected claim to a priority date. This allegation is incorrect, since the claim to a priority date has not been perfected.

Conclusion

9. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to KENAN CEHIC whose telephone number is (571)270-3120. The examiner can normally be reached on Monday through Friday 8:00-5:30.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, KWANG BIN YAO can be reached on (571) 272-3182. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Kenan Cehic/
Examiner, Art Unit 2616

/Kwang B. Yao/
Supervisory Patent Examiner, Art Unit 2416